BROMELETTER

THE OFFICIAL JOURNAL OF THE BROMELIAD SOCIETY OF AUSTRALIA INC.
bromeliad.org.au

BROMELETTER is published monthly by the
Bromeliad Society of Australia Incorporated during COVID restrictions

ISSN 2208-0465 (Online) Vol 59; No 2 February 2021

Please send articles for Bromeletter to
editor@bromeliad.org.au
and all other correspondence to:
The Secretary, Bromeliad Society of Australia Inc.
PO Box 340,RYDE NSW 2112.

CONTENTS

COMMITTEE

President	Ian Hook	(president@bromeliad.org.au)	0408 202 269
Vice President(1)	Kerry McNicol	(membsec@bromeliad.org.au)	0439 998 049
Vice President (2)	Joy Clark		0409 717 794
Secretary	Christine Johnson		02 95193105
Treasurer	Alan Mathew		0430 806 636
Assistant Treasurer	Sari Kilpinen—Hughes		0424 272 467
Public Officer	Bob Sharpley		0439 672 826
Editor	Larissa Victoria		0403 253 572
Member	Carolyn Bunnell		02 9649 5762
Member	Helga Nitschke		0447 955 562
Member	John Noonan		02 9627 5704
Member	Amal Eid		amalianne@yahoo.com.au

OFFICE BEARERS

Book Sales & Librarian	Ian Hook
Member Secretary & Purchasing Officer	Kerry McNicol
Catering	Annamari Kilpinen
Assist Catering	Joy Clark
Raffle Sales	Peter Fitzgerald
Plant Sales	Ron Farrugia
Plant of the Month / Show Registrar	Terence Davis
Show coordinators	Ian Hook / T. Davis
Show Display	Joy Clark
Publicity Officer	Di Tulloch

Photo Front Cover

Ray Henderson's garden show cases the different colours of sun loving bromeliads.

Greetings to all BSA members,

Just 12 months ago we were hand watering our precious bromeliads and watching it quickly evaporate with the hot weather, the clouds of soot from the bushfires and the high winds. How different this summer has been with virtually non-stop rain for weeks on end. Now we face different problems with our broms been waterlogged, some with crown rot, fungus sprouting in our potting mixes, and slippery mossy surfaces underfoot, then followed by some heat wave days.

Many plants in the garden have grown amazingly, everything is looking green and lush, yet some broms have lost their lovely bright red colours through the lack of sunlight. There is nothing like rain to bring in new and steady growth. So what makes the difference?

Life Members:

Ron Farrugia
Graham McFarlane
Bill Morris
Ian Hook
Allan Beard
David Scott

Tap or bore water is slightly alkaline to prevent the corrosion of pipes and taps and contains less carbon dioxide and oxygen than rainwater says Graham Barclay. On the other hand, rain absorbs carbon dioxide which aids its combination with other minerals and makes the watering slightly acidic. Bromeliads prefer the slightly acidic water as this facilitates the release of nutrients and trace elements such as manganese, iron, potassium, copper and zinc which are important for good plant growth.

So let's appreciate all that nature provides in times of sunshine and in times of rain. Continue to have happy days with your broms and let's hope we see each other soon. from Larissa (editor)

FEBRUAry and March MEETINGS

Our February meeting, scheduled for the 6th February is on the **first** Saturday of February (not the second) and will be in the Federation Pavilion. **This will be our AGM meeting.**
The following meeting is scheduled for **March 13th 2021.**

WEBSITES

Bromeliads in Australia	http://bromeliad.org.au
Encyc of Bromeliads	http://encyclopedia.florapix.nl/
BSI Cultivar Register	http://registry.bsi.org/
Florida Council of Bromeliad Societies	http://fcbs.org/
Bromeliario Imperialis	http://imperialia.com.br/

MEMBER PROFILE—RAY HENDERSON

Source: interview with Ray Henderson. Photos R.Henderson; L.Victoria

After growing up on the Northern Beaches, with some time at boarding school and in the country, Ray embarked on a two year horticultural course at Hawkesbury Agricultural College, Richmond, as he always had an interest in plants. On finishing college he started work at Greenfingers Nursery, Warriewood, the largest plant hire nursery in Sydney.

This was such a large business that employees would be assigned to just one plant. So all week you would be planting seeds, bringing on seedlings, repotting, watering and preparing plants for hire, but just for one plant. Ray's plant was the 'umbrella tree'. So it was boring, but a good way of seeing how the seasons affected a particular plant.

After a year, he moved to another plant hire nursery and subsequently began to work at Flower Power in Warriewood, with both a wholesale and retail section. Here Ray learnt a lot about numerous plants, management, organisational systems and stocking appropriately for the geographical region.

After working six days a week, with 10 hour days on the weekends Ray needed a change. He swapped his muddy boots and clothes for business suits and an air conditioned office and went to work with his dad as a Real Estate agent in the North Narrabeen. This was prior to the boom, when good houses could be bought for $150,000. However, after a while he was worn out, tired of up talking properties he saw glaring faults with and yet he was acting for the seller. He found his heart was just not in it, so it was time for a change.

HOW DID IT ALL START?

When at Greenfingers Ray came across an *Aechmea fasciata*, which he was told died after it flowers, so of course that put him off it. Sometime in the 1990s, he was gifted an *Aechmea recurvata var recurvata*, it was very green and for some reason Ray thought of putting it in the sun and of course when this happens it colours up beautifully. Even today he is surprised how many of these aechmeas are placed in shade houses in retail nurseries. Ray sells his as a sun loving plant.

He attended the Plant Lovers Fair in Kariong where he came across more alcantareas, *Alc* Hellfire and *Aechmea blanchiata* and noticed these were not in retail nursery.

FUTURE PLANS

Future plans - future plans include shade houses and perhaps increasing the number of open days. Ray finds his set up satisfying and is content because he is successful in doing what he enjoys. There have been some failures but Ray sees these as learning experiences.

Cont —RAY HENDERSON

Working in real estate triggered the idea of buying land and working for himself. Initially he wanted land on the Northern Beaches, however as this wasn't possible. Ray and his wife started looking in the Hunter Valley and Central Coast. Finding their current block was not as straightforward as they thought, with some initial trepidations because of all the covenants on the land and private road. The block was just empty horse pasture with a row of liquidambers at the back (photo above right). Looking back, the decision was a good one and they are very happy with their current home and land.

The gardens and nursery were developed together. Ray was quite set on having a dragon tree (photo: middle left) and this magnificent tree stands proudly in one of the beautiful gardens near the house. Paths weave around the garden beds that are formed on raised mounds. This gives height, undulation and interest to the garden. In the nursery sections Ray grows succulents, clivias and bromeliads, particularly the sun loving ones, supplying smaller nurseries that stock the more unusual plants. Additionally, he holds open days, which are becoming more popular mainly through Facebook contacts. For those of you who haven't been to Ray's open days, definitely make a plan to do so soon.

Photo above: towering agave spikes with *Quesnelia arvensis* (left) and *Billergia* 'Ralf Graham French' (right).

FAVOURITES

Definitely the alcantareas. Ray raises the alcantareas pups in normal potting mix (with some ash) bought in bulk, and adds a slow release fertiliser with high potassium. (also in Bromeletter 6:2019) He has tried raising alcantareas from seeds, but finds that in the Glenning valley his seeds don't do as well, whereas when he lived in East Gosford he raised clivias and banana seed without any problems. For some reason seed raising doesn't work for him in the valley which annoys him, as there is a variegated clivia he would like to raise from seed, as it's quite unusual.

LOVES

Ray enjoys being on the land, especially the aspect from his back veranda which overlooks the entire block and gets the benefit of the sea breeze. He feels his time working in other nurseries has given him an eye for presenting each plant at its best, looking at form and balance (eg leaves in the wrong spot). This is a blessing and a curse, as he can always see what needs to be done when he walks around his property.

Read more on the another alcantarea Ray grows on page 20.

Photo above: Abyssinian banana with portea inflorescences.

Two photos right: some of the nursery areas.

WHEN THE ONLY WAY IS UP

Source: T. Davis, K. McNicol, L.Victoria. Photos: L.Victoria

"I've got no more room", is a common compliant among bromeliad society members, so going **'UP'** is the only solution, whereas having fewer broms is not.

While the following two methods have previously been explained at meetings, they are worth mentioning it again.

Terry Davis uses this method for his tillandsias. He hooks the mounts onto a cylindrical wire cage, then suspends this cage by a swivel fishing hook, so the frame rotates and takes advantage of the breeze (tillandsias love good airflow) that he gets on his block and it also allows him to water each side.

The second method is making a hanging frame from gutter guard (hint from a 2019 meeting). Photos 1-4 from left to right.

Photo 1 - The gutter guard is threaded onto a long hanger, making loops and pockets.

Photo 2 and 3 - The bottoms of the loops are closed with cable zip ties and each pocket lined with sphagnum moss and filled with rocks and a small amount of potting mix. I planted mine with mini neoregelias, and where necessary secured them to the mesh with a zip tie or cut a bigger opening where necessary.

Photo 4 - I used a turnbuckle at the top for hanging the frame, this allows the frame to turn when being watered.

UPDATE on MEETINGS during COVID

We will try to go ahead with all meetings, however, as has been seen, external factors can quickly change (sometimes hourly) and affect our stance. In general, Government Health restrictions must be followed to the letter. This obviously includes mask wearing, sanitising, social distancing and most importantly restricted numbers. As we have recently seen anyone from nominated 'Hot Spots' must not attend. COVID-19 rules must be agreed to prior to invitation and those who registered for the January meeting will have already given/sent Ian their agreement and their agreement will hold for all further meetings.

We will try to leave cancellation till as late as practicable, but we will notify most people by email and the few without email, by phone. (This excludes members who do not come to meetings due to distance or other restrictions).

SO, if you did not receive any notification regarding COVID cancellation meetings, please contact Kerrie to update your preferred method of notification, as we did find some members were unable to be notified.

During our meetings:

Hand sanitizer will be available at many and various points. Chairs, tables and high touch areas will be frequently sanitized.

No shared food (only for household groups). Tea, coffee cups, makings etc., should be brought from home. The only thing we will supply is hot water (to be dispensed by nominated, masked, gloved volunteers)

SALES TABLES – a designated area will be marked out and masks and gloves **MUST BE WORN** when you enter the Sales area. Buyers must follow instructions, signs and markings on ground.

SALES will begin at **10.00 am** and be finished by **12 noon**, sharp. Between 12 - 12:45 pm sellers and buyers will pack away plants, members can have lunch, a cuppa and mingle **SAFELY**.

MEETING: Will begin at 12.45 or soon thereafter. Masks to be worn inside. Chairs and table will have already been sanitized.

Agenda - General business, show and/or ask; a short talk, anything any member would like to discuss.

There will be **no speakers** until times return to some form of normalcy.

THIS MONTHS HINTS - TIPS FOR NEW COLLECTORS

Source: Under the Mango Tree - J.Catlan

Ensure that you have adequate boxes or containers to take your plants home in, so they don't leak water all over your vehicle. Rubber mats that clip together can be protect your boot, large plastic boxes for back of the car are better than cardboard ones. When you place plants in your car boot cover them with layers of newspaper to stop the radiant heat from your boot lid burning the plants, this is especially important in the heat of summer.

If you are in a hurry when you get home and don't have time to pot up pups, stand bromeliad pups loosely and upright in empty pots, water well to make sure the cups are full, then store in a very shady position until you are ready to pot them up. This doesn't apply to grey leaf Tillandsias which require a bright airy position and will do best if they are dry by the time the sun goes down.

TIP FROM SOCIAL MEDIA

Like many, I never took part in social media, but COVID-19 changed that. As I missed talking and seeing broms, I joined a few bromeliad interest groups and here I picked up this tip on growing bromeliads just in bark chips. I had a garden area under a liquidambar tree, which rests on sandstone rock, right on the street footpath. Nothing would grow there, the soil was too shallow and the roots of the liquidambar extensively matted. Older azalea varieties which were here when I moved in have struggled to survive for years, and now just one is left. As per online advice, I covered the area with weed mat, placed rocks on the edge to keep the mat down and filled the section with only old bark chips. I planted just the common varieties of bromeliads, as I wasn't sure how many would disappear being adjacent to the footpath. They were secured with sandstone rocks. The majority have taken well and are now pupping, and best of all it looks much better. I still have another section to do, so its good to know this works. Larissa

A NEW SPECIES!

A new species has been found on a limestone outcrop (photo bottom right) in Tocantins State, Brazil.

A new species of bromeliad, Acanthostachys calcicola, a third taxon for the genus, is here described. A. calcicola was discovered during field work in the limestone outcrops of south-eastern Tocantins, central Brazil. It is most similar to A. strobilacea, but differs from it in petal colour and length, and exserted stamens and pistil. A conservation assessment classifies A. calcicola as endangered (EN) with extinction.

Gabriel Mendes Marcusso, Alexandre K. Monro, Pablo Hendrigo Alves de Melo and Julio Antonio Lombardi. 2020. Source: https://novataxa.blogspot.com/2020/12/acanthostachys-calcicola.html?fbclid=IwAR3wXGOnK5TEuTM-peqXpb2N66BbU1acBuVr-n4AFvskBkriWPg4e06YDFM

Bromelia balansae

Source: D.Timmins JBSNZ VOL60 NO11; Ian Hook. Photos: JBSNZ VOL60 NO11, Kerry Tate 2010.

Bromelia balansae is a huge bromeliad measuring at just over 2 metres (7 foot) it is also known as 'Heart of Flame'. According to Ian Hook, there was a specimen in Kew Gardens which they placed on an island in the middle of a lake, just to contain it and now no one can enter the island due to its huge and spiky nature. Bromeletter no 10. 2020 featured the genus of Bromelia, which contains some of the largest and viciously spiked bromeliads.

And then just to muddy the waters re Bromelia balansae **(Source: BSA website)**

Bromelia sylvicola is frequently, but wrongly, labelled as Bromelia balansae in Australia and USA.

- sylvicola has maroon petals with a white edge, and the plant in flower is a metre or so tall and the leaf rosette is 1 to 2 metres in diameter.
- balansae has violet petals with white edge and is much bigger. With the plant reaching nearly 2 metres tall with leaves 4 to 7 metres long!"

Alternately, Derek Butcher thinks that many plants labelled B. balansae in Australia are actually B. serra.

A brave man.

NZ Bromeliad Society member Graeme Barclay with a **'small'** pup of Bromelia balansae he had obtained and planted in his garden!

Bromelia balansae and friends

Source: Behavioural Ecology, 13 April 2010. Photo: www.portugal.inaturalist.org.

Despite its huge size the Bromelia balansae has a facultative, symbiotic, mutualism with a tiny jumping spider, the Psecas chapoda, which lives and breeds within the spiny Bromelia balansae.

Studies of this relationship revealed the following:

- The entire life cycle of P. chapoda, including courtship behaviour, mating, egg sac deposition, and population recruitment of the young occurs on this bromeliad.
- Spiders showed a preference for rosette-shaped plants with narrow and long leaves, entirely on the basis of choice by vision, perhaps this chooses microhabitats that are aid its survivorship.
- **There's a place for everyone and everyone has their place,** it seems that different parts of the bromeliad are used for different purposes, such as:

- The central concavity of the B. balansae leaves acts as a shelter where females deposit egg sacs.

- The structure of the leaves is utilised during courtship; females remain in the base of the rosette, whereas males occupy the upper part of the leaves for their courtship displays.

- Adult and immature spiders use the base of the rosette as a refuge from predators.

This spider–plant relationship is mutualistic, where spiders benefit from inhabiting the host, while the debris derived from their biological activities improve plant nutrition – note the spiders supply up to 18 % of the Bromelia balansae total nitrogen intake.

TERMS

Facultative - optional, the species are not fully reliant on each other for survival.

Symbiotic - living in, or a close physical association between two or more dissimilar organisms.

There are three different types of symbiotic relationships: **mutualism, commensalism and parasitism**.

- **Mutualism**: both partners benefit.
- **Commensalism**: only one species benefits while the other is neither helped nor harmed.
- **Parasitism**: one organism (the parasite) gains, while the other (the host) suffers.

GONDWANA and THE PLANT WORLD

Source: Robert Wall 2021. Photos: wikipaedia.

Gondwana and the Plant World.

The distribution of bromeliads in the southern hemisphere lead some people to conclude that bromeliads might somehow reflect a **'Gondwanan'** history. **'Gondwana'** is a common term used in plant biogeography, but is often misused and misunderstood. It is useful to look at the concept of Gondwana and its relationship to the broader plant world.

The Gondwana Continent and its Break-Up. From around 190 mya, large chunks of the **Gondwana** super-continent, broke off, drifted apart and became the great southern continents of today. Africa was the first, breaking away about 170 mya, followed by Madagascar and India. South America began a long, slow separation, the schism being complete around 130 mya. The last major split formed Australia and New Guinea around 43 mya. The southern land-masses of Australia, Africa, South America, Antarctica and India that we have today were at one time all part of the Gondwana supercontinent.

A Southern Puzzle. Since the earliest voyages, scientists noticed a remarkable similarity in the flora of the widely-dispersed, southern continents, a puzzle to early botanists. Examples included:

- Protea-like plants found in Africa and in far-away Australia.
- Nothofagus (Southern Beeches), found in Australia and in South America.
- Many extant plants, especially those with ancient lineages, have their origins on the super-continent of Gondwana. Nothofagus for instance, originated in Antarctica and was widespread across the Gondwanan continent. When Gondwana split into fragments, Nothofaguswas spread across the southern land masses, so this group is termed 'Gondwanan', it also has a signature 'Gondwanan' distribution.

mya - abbreviation for 'million years ago'

GONDWANA and THE PLANT WORLD

Unravelling the Gondwanan Mystery One of the greatest discoveries of Captain Robert Scott's doomed Terra Nova Expedition to Antarctica (1910-1913) was the fossil of the Permian plant, Glossopteris (270 mya). The Glossopteris fossil was already known from the continents of Australia, South Africa, South America and India, but its discovery in Antarctica was crucial evidence to support the argument for the existence of a great southern continent, **'Gondwana-land'**.

The fossil material collected by the expedition was recovered alongside the bodies of Scott's team. While the team had jettisoned much in a desperate attempt to return to safety, they had kept the hefty 1.6kg of fossils, so there is much debate on whether Scott and his team understood the ground breaking importance of the Glossopteris fossils, and if not why were they so determined to bring these fossils back to the known world?

Does having a Gondwanan Distribution mean that Species Originated in Gondwana? - No. Many people confuse the two concepts, so it is worth examining the fossil record of just two very ancient plant groups to understand why.

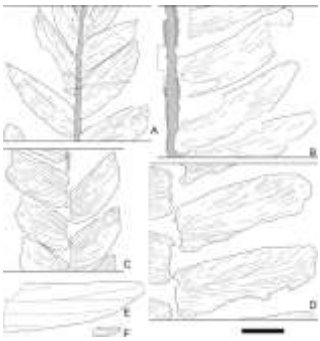
1. **The Southern Conifers.** Conifers are a very old group first found in the fossil record around 300 mya. It is around 225 mya that we can confidently ascribe fossils to modern taxa. Araucariaceae is one of the most primitive families of conifers. Many Sydney beaches feature stately Araucaria trees. Araucaria is a 'southern conifer', it is spread across the southern land masses and does not occur in the northern hemisphere. Does it descend from ancient Gondwanan stock? The fossil records tells us not as Araucariaceae was widespread throughout the world and pre-dates 'Gondwana'. Araucaria has been found in England, Greenland, Sweden and across North America. The fossilised tree trunks of Arizona's Petrified Forest National Park are all Araucarian.

Many people would be familiar with the Wollemi Pine, incorrectly considered "Gondwanan". Often termed 'a living fossil', it was known only from fossil remains before the discovery of the living species in 1994. It was once found world-wide.

GONDWANA and THE PLANT WORLD cont

How can the Araucarians, a group so closely associated with the southern continents today, be so prevalent in the archaic flora of the north? Importantly, we need to recognise that while this group has an ancient lineage and possesses a Gondwanan distribution, it **does not** have a Gondwanan origin. We may never know why the Araucarians should die out in the northern hemisphere, while remaining resolutely in the south.

The Redwoods - Sequoia in Australia. Another very ancient group, and one possessing perhaps the most extensive fossil record across northern hemisphere continents is Sequoia. It is the tallest living tree in the world. From their former dominance, today redwoods survive in small, relictual populations, sandwiched between the mountains and the sea. They live in regions where there is abundant rain or moisture in the form of trapped fog. These moist coastal environments most closely replicate the conditions of the Mesozoic era, a time when the redwoods were at their peak.



The Australian fossil record has yielded several specimens of Austrosequoia wintonensis (literally “sequoia of the south”). Closer examination of the seed cone, leaf and wood reveals that Austrosequoia is strikingly similar to modern Sequoia. (drawing on right—researchgate.com) Many researchers suggest that Austrosequoia and Sequoia may be congeneric (i.e. it is more closely related than first thought).

The discovery of Austrosequoia in Australia raises questions about the Redwood’s history in the south. Why should the Redwoods, an historically robust group, and a group possessing a formidable fossil record across the entire Eurasian continent, North America, and in the dimly-lit palaeo-Arctic forests, become extinct in the southern hemisphere, at a time when they were flourishing in the north?

Why and how taxa like the Araucarians and the Redwoods separated with such a high degree of selectivity is not well understood. Why they retreated to their chosen hemispheres (in diametrically opposite directions), remains a mystery. Clearly there were some ecological driving forces at work. While Gondwana may be part of the story, it is far from the entire story.

GONDWANA and THE PLANT WORLD cont

Southern Hemisphere Distribution of Bromeliads

The modern distribution of many plant groups sometimes provides surprisingly little information as to their place of origin. For a group like Bromeliads, their relatively recent appearance (100 mya) on a continent (South America) that had long-ago split from Gondwana, precludes any association with a Gondwanan heritage.

References: Enright, N., and Hill, R. "Ecology of the Southern Conifers" Smithsonian Institute Press. Washington D.C. 1995.

Hill R.S. and Brodribb T.J. 1999. "Southern Conifers in Time and Space" Australian Journal of Botany. 47: 639-696.

Kangshan Mao, Richard I. Milne, Libing Zhang et al. "Distribution of Living Cuppressaceae Reflects the Break-up of Pangea" Proceedings of the National Academy of Sciences of the United States of America. 109 (20): 7793-7798.

Kenrick P, Chaloner B, "Did Captain Scott's Terra Nova Expedition Discover Fossil Nothofagus in Antarctica?" The Linnean. Vol 31 (2) Oct. 2015.

Leslie, A. Beaulieu, J. et al. "Hemisphere-scale Differences in Conifer Evolutionary Dynamics". Proceedings of the National Academy of Science of the United States of America. Vol 109. No. 40. Oct 2012. pp 16217-16221.

SHOW AND TELL - Harold Kuan

Source: Explanatory species text and photos by Harold Kuan

Harold is well known in our society for winning many of our competitions with some beautiful bromeliads, particularly his tillandsias. Here are some of his tillandsias that are currently flowering. These photos capture their amazing beauty and in a small way make up for missing out on seeing the many lovely competition broms.

***Tillandsia* 'Purple Razz'** A hybrid of *Tillandsia aeranthos* and *Tillandsia seideliana*. I really love the caulescent growth habit of this one. Apparently, it is a little hard to distinguish from a *regular T.seideliana.*

SHOW AND TELL - Harold Kuan cont….

Tillandsia **'Hyde's Silver' (photo above left)**

Possibly a hybrid of *Till.* bulbosa. Normally *Till.* bulbosa has glabrous leaves, but this one has visible fuzzy white trichomes on it. This particular one won Grand Champion one year, and has since begun clumping nicely.

Tillandsia fasciculata **'Front Cover' (x2 photos below right)**

A really handsome, tight, medium-sized fasciculata. I learned that it was given the name **'Front Cover'** because Chris Larson had referred to it as the plant that was one the front cover of one of the Victorian newsletters. The rainbow of colours in the inflated inflorescence is beautiful.

Tillandsia **'Sweet Sugar' (photo above left)**

I bought this as 'Sweet Sugar', however I think its name is actually 'Pink Sugar', especially since the quoted parentage is the same: *Till. sucrei* x *Till. geminiflora*. Despite its dainty size, it puts on quite a show, with a large bouquet of pink flowers.

Tillandsia ionantha **(photo right)**

Everyone's got one in their collection because there's so much to love about them. The number of varieties of *Till. ionantha* are countless, which makes them all the more fun to collect! This one is from Terry.

SHOW AND TELL - Harold Kuan cont….

EATEN! - The main problem I have with my tillandsias would be pests. As per photo, something is VERY fond of chewing up on my tills' hard-earned inflorescences just before they flower. Many nice plants have been decimated, it's very frustrating! Because I sometimes find grasshoppers on my plants, I assume it's them doing the damage – though I have never caught one in the act. As I don't have an enclosed shadehouse, and since I don't want to go spraying things everyday, I guess it's just something I have to live with. You win some, you lose some!

NB

CORRECTIONS FROM LAST ISSUE

In the financial report **the date** should read
Opening Balance at Bank 01/12/2020

……

Issue 1, 2021 - Page 10: ***Vriesea splendens*** is now in a new genus - ***Lutheriana splendens***.

Derek Butcher (2018) writes….This has been a splendid plant ever since 1845 when it was first described. It also meant that botanists were giving it different names hence the many synonyms. There is also disagreement as to the status of the varieties where the World Checklist WCSP (Based at Kew) treats them as heterotypic synonyms of the type. When Barfuss et al published their paper in Phytotaxa 279(1): 001-097. 2016 they only used DNA from Vriesea splendens var splenden as far as I am aware… (read more on our website). Photo: D.Butcher

Report from Treasurer Alan Mathew for January 2021

Opening balance at bank - 1st January 2021	$20,133.18
Income:	$286.00
Less Expenses:	$75.56
Closing balance - 31st January 2021	**$20,343.62**

SHOW AND TELL

Alcantarea 'Landsendt Blue Grey' - Ray Henderson

Ray Henderson grows some beautiful alcantareas, the one which caught my eye and is now on my 'wish list' is ***Alcantarea* 'Landsendt Blue Grey'.** Its history is reproduced below, from an article by Geoff Lawn **(J Brom Soc 61 (1): 40. 2011)**

In recent years alcantareas have become the genus in vogue. Many have come into collections with questionable identity as to which species they represent. Some have been given either cultivar names or tagged as to where collected in the wild, until they are botanically described or more information comes to light.

Such a case is a yellow-bracted form of *A. imperialis* with creamy white petals, unlabelled seed from which was imported from Landsendt Nursery, Auckland, New Zealand into Australia in 2005 by Brisbane grower Arno King who then described the seed batch as *Alcantarea* 'Blue Grey' after the seed parent's foliage colour. Landsendt Nursery have since distributed this form in New Zealand as 'Glauca'.

That imported seed batch has produced a maturing uniform population with few variants, indicating it breeds true to type from self-set seed. The leaves are bluish green coated powdery grey and the rosette can reach over l - 1.5 metres diameter with the inflorescence up to 3 metres tall. Sydney grower Mark Paul has studied Alcantareas extensively in Brazil and advises that there is a distinct large natural population of this yellow-bracted form at Petropolis in Rio de Janeiro State.

Enquiries with Landsendt Nursery as to its horticultural origin lead to Auckland grower Len Trotman who imported 25 so-called *Alcantarea imperialis* "green" in 2000 from Tropiflora Nursery in Sarasota, Florida. Whether those imported plants had this yellow-bracted strain among them is doubtful.

After much discussion the decision was made to name and register this attractive, majestic cultivar as *Alcantarea* 'Landsendt Blue Grey' after the New Zealand nursery stock from where this particular strain emanated.

SHOW AND TELL - *Tillandsia recurvata* -Terry Davis

Source: Wikipedia; T. Davis; airplantforest.com/tillandsia-recurvata.

Photos: wikiwand; pinterest; L.Victoria.

Tillandsia recurvata is colloquially called 'small ballmoss', although it is not a moss. In habit, *Tillandsia recurvata* tends to form a sphere ranging in size from a golf ball to a soccer ball, though this is actually a collection of multiple 'pups' growing joined together. It is primarily epiphytic but is sometimes terrestrial in dry habitats. It is found from near sea level to 3000 m alt, from southernmost US to Argentina. This tillandsia seeds very readily, with the seeds embedding themselves quickly in both organic and non-organic material.

This is the species we see photos of on fences and telegraph wires in South America. (photos on next page). In the photos above left you can see how successfully this small tillandsia has seeded and taken hold in the cracks of the corrugated panels of Terry's shadehouse.

Tillandsia recurvata takes about 3 years to mature and flower, it then blooms for the next 7 years. It blooms from a simple inflorescence with a spike head at the end of thin and scaly stalk. The inflorescence grows very few flowers (typically 1-2), sometimes even only a single flower or rarely up to 5 flowers. The flowers are erect and subsessile, with pale violet or white narrow petals.

It can survive in extreme low temperatures from -12.2 to 4.5 degrees Celsius.

Just like all tillandsias, its preferable to use rain, pond or spring water, but for Tillandsia recurvata, you can also use filtered water or tap water. If using tap water, leave to stand for a few days so the chlorine in the water dissipates. As dissipation takes a few days, plan ahead.

Bright filtered light is best for Tillandsia recurvata and try to avoid full sun exposure.

I'm not fussy—just give me a bit of space on a fence or telegraph wire, and I'm happy!!!!

Below is the list of seeds in our Seed Bank

Alcantarea extensa	27.11.19	Terry Davis
Tillandsia. gardneri	25.09.20	Terry Davis
Tillandsia utriculata 'Black Stem'	18.9.20	Steve Molnar
Tillandsia loliacea	11.10.20	Greg Aizlewood
Alcantarea 'Silver Plum'	11.10.20	Greg Aizlewood
Tillandsia tricholepsis	11.10.20	Greg Aizlewood
Tillandsia seleriana Giant form ex. Chris Larson	12.10.20	Steve Molnar
Tillandsia novakii	30.10.20	Greg Aizlewood
Tillandsia schiedeana yellow	30.10.20	Greg Aizlewood
Tillandsia ionantha (Mexico)	02.11.20	Greg Aizlewood
Tillandsia minutifolia	17.11.20	Greg Aizlewood
Tillandsia capitata rubra	29.11.20	Kerry McNicol

Seeds cost 50¢ per packet (plus postage) for Members and Seed Bank supporters or $1 per packet (plus postage) for all other enquiries:

Contact *Terry Davis (02) 9636 6114 or 0439 343 809*

For a full list please go to bromeliad.org.au

If you have seed to donate please contact Terry.

MAIL ORDER PAYMENTS BY MASTERCARD/VISA.
(Subject to A$10.00 minimum.)

Members using Mastercard or Visa mail order facility should provide the following details, printed clearly in block letters, on a separate sheet of paper:

- Name and address of **MEMBER**.
- **TYPE of card** (Visa, Mastercard)
- **CARDHOLDER** name details, as shown on card.
- Mastercard/Visa **number** and **expiry date**.
- **CARDHOLDER** signature (essential).

LITERATURE for Sale

http://www.bromeliad.org.au/Contacts/BSALibrarian.htm

TITLE	*AUTHOR*	*PRICE*
Bromeliads for the Contemporary Garden	Andrew Steens	$20.00
Bromeliads: A Cultural Manual (Rev. ed. 2007)	BSI	$ 6.00
Bromeliad Hybrids 1: Neoregelias	Margaret Paterson	$25.00
Bromeliads Under the Mango Tree	John Catlan	$10.00
Bromeliad Cultivation Notes	Lyn Hudson	$10.00
Growing Bromeliads – 3rd Ed. by BSA IS BACK!.		$20.00 (mmb price)

If undelivered, return to:
Bromeliad Society of Australia
P.O.BOX 340,
Ryde NSW 2112
BROMELETTER
Print Post Approval
***No.* PP100001193.**

PRINT POST
PP100001193

POSTAGE PAID AUSTRALIA